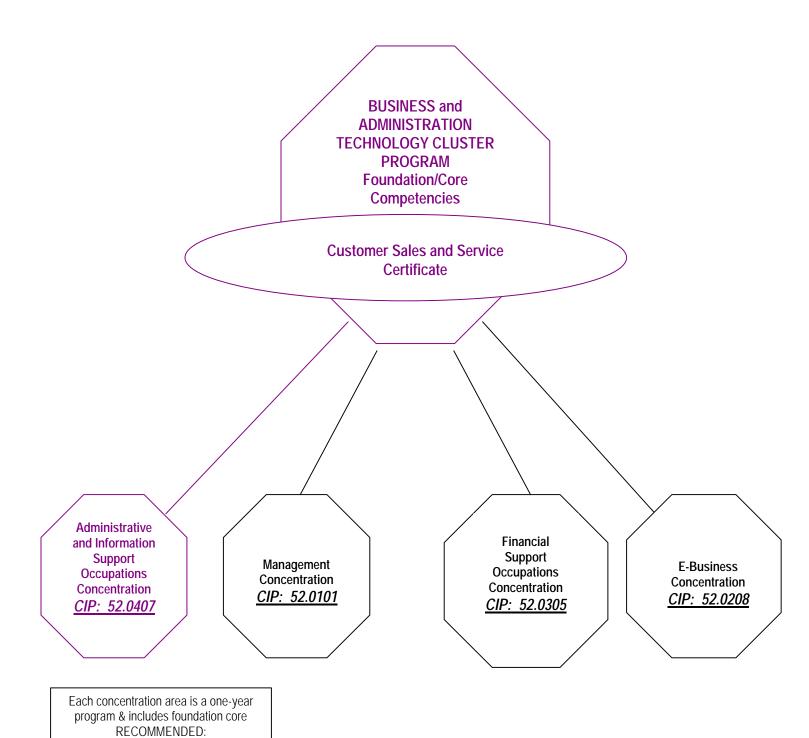
BUSINESS AND ADMINISTRATION TECHNOLOGY PROGRAM CLUSTER MODEL

Career Cluster: Business and Administration State Board Approved May 21, 2002



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Pre-requisite: Keyboarding Study Sequence: Year 1: Core Year 2: Choice of 2nd Concentration

Administrative And Information Support Occupation Programs

CIP: 52.0407

(Business and Administration Technology Cluster Program)

Program: Business and Administration Technology Career Cluster: Business and Administration Concentration Areas:

- Administrative and Information Support Occupations
- Management Occupations
- Financial Support Occupations
- Business Analysis and Communications E-Business

Program Scope and Content: A one-year program will include meeting the foundational competencies and the competencies of one area of concentration. A two-year program model is recommended, with the Administrative and Information Support Concentration being the pre-requisite to further study within the career cluster. For a two-year program model (240 minutes, 2 semester, 1 year) the Administrative and Information Support Occupations Core Competencies will be satisfied the first year with a second concentration area being chosen for further study.

Administrative and Information Support Competencies

- Competencies are based on the National Business Education Standards and are aligned with the Vocational Technical Education
 Consortium of States (VTECS) Business Administrative Support Occupations Technical Core Skills. Certificates offered to students are
 developed on a local basis and should reflect that the first year core competencies are based on the V-TECS industry recognized
 standards.
- Completion of foundation competencies will prepare students for assessment to gain the certificate in Customer Service, an industry recognized credential offered from the Sales and Service Voluntary Partnership, based on industry skill standards.
- Completion of the Administrative and Information Support competencies will prepare students who gain work experience (4 years, with no
 degree, 3 years with an AA degree) to sit for the Certified Professional Secretary's Examination. Students participating in the work-based
 component may satisfy a portion of that requirement through cooperative education participation. Students who sit for this exam are
 advised to complete coursework in Business Law (basic and commercial), Accounting and Economics, Information Systems. Candidates
 whose secondary training has not included this content could complete the 3-6 hours at the community college level. The Institute
 administers the CPS Examination for Certification, a department of the International Association of Administrative Professionals.
- Administrative and Information Support competencies will prepare students to test for the IC3 Internet and Computing Core Certification through Nivo.

Occupational programs are expected to include a work-based experience. Occupational, work-based programs should also include opportunities for industry-based certifications. Program instructors who offer these certifications are expected to hold appropriate/required industry training/certification. Programs MAY include the following Industry Certifications and Vendor Product Certification Courses:

MCP – Microsoft Certified Professional www.microsoft.com/trainingandservices.redirect/
Excel

Microsoft Access

MOUS – Microsoft Office User Specialist

IC3 – Internet and Computing Core Certification (Nivo International) www.nivonet.com/ic3/

MCDBA – Microsoft Certified Database Administrator www.microsoft.com/trainingandservices.redirect/

AWP – Associate Webmaster Certified (World Organization of Webmasters) www.ciwcertified.com/

OTHER certifications may be offered as determined locally. However, these certifications should be approved in advance by the Vermont State Department of Education.

A strong, well-rounded business program should provide learning opportunities for students in not only Administrative and Information Support concentration area (applications and processes), but also in the Information Technology career cluster. Please refer to the Information Technology Competencies. Instructors in viable and "21st century programs" will openly discuss with information/computer technology teachers, and other instructors, collaborative ways to provide these opportunities. In some instances business teachers may themselves teach the Information Technology Competencies. However, instructors will have demonstrated competency in satisfying the necessary requirements for appropriate licensure.

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Embedded Credits: English - Administrative and Information Systems concentration, Business Management Concentration, E-Business Communications, Math - Financial Occupations Concentration

Articulation Agreements: Developed locally

Assessed through: Scenarios, Rubrics, and Portfolios, State Career Cluster Initiative, Methods and Assessment Pilot Sites to be Determined

Other Assessment Possibilities: Third Party: BrainBench www.brainbench.com, NOCTI www.nocti.org, Webyoda www.nocti.org, Scenarios (being developed nationally through the Business Career Cluster States' Initiative www.careerclusters.org), Rubrics, and Portfolios

Youth Leadership Competencies may be met through Future Business Leaders of America (FBLA) or DECA or other youth leadership groups through co-curricular activities.

Career Specialties Include:

Administrative

Desktop Publishers

Entrepreneurs and E-Business Developers

Administrative Assistants

Information Systems Support Personnel

Medical and Legal Assistants

Receptionists

Customer Service Personnel

General and Operations Managers

Bookkeepers

Payroll and Timekeeping Clerks

Accountants

Webmaster

Medical Transcriptionist

Legal Assistant

Computer operators

Court reporters

Stenographers

Information Clerks

Records Processing Occupations

Word Processors

Data Entry Keyers

Office Managers

Career Cluster Occupational Outlook

It is expected that nationally, Administrative and Information Support Managers will be needed through 2008 to coordinate an increasing amount of support work. They will be required to ensure that technology is applied and running properly. In addition, as organizational restructuring continues to reduce some middle management positions, these responsibilities are being distributed to Administrative and Information Support personnel and supervisors. This added responsibility combined with relatively higher skills and longer tenure will place Administrative and Information Support supervisors and managers in a place most likely to retain their jobs long term. In 1998, the median annual earnings of full-time office and administrative support supervisors were \$31,090; the middle 50 percent earned between \$23,950 and \$40,250, with the Federal government paying the highest salaries. (Source: Occupational Outlook: www.bls.gov.) Administrative and Information Support personnel and managers require broad based training, usually through career and technical schools, followed by at least two years of post secondary training. Other clerical occupations require less training and demand less compensation.

As Administrative Assistants gain experience, the Certified Administrative Assistant certification may be earned. This certification is through the Office Proficiency Assessment, a Certification program offered by the International Association of Administrative Professionals. Job openings should be plentiful, particularly for well-qualified and experienced Administrative Assistants, particularly for those who specialize in health and legal services who may be certified by National Association of Legal Secretaries (www.nals.org). Although technology changes the work responsibilities, many Administrative Assistants' duties are of a personal, interactive nature and therefore, not easily automated. Since technology cannot substitute for these personal skills, Administrative and Information Support will continue to play a key role in most organizations.

Latest Vermont Occupational Outlook Information

Vermont's 2000 Occupational Outlook – Labor Market statistics indicate that occupations expected to grow between from 2000 to 2010 include general managers, office clerks. Remaining in excellent demand are Executive and Administrative Assistants, and specialists in the medical and legal areas. Executive secretaries and Administrative Assistants currently earn an average salary of \$32,520 in the US, and \$31,670 in Vermont. In Northeastern Vermont the average salary is \$34,652. The average US salary for Administrative Services Managers is \$52,650 and the average salary in Vermont is \$50,780. First-Line supervisors/Managers of Office and Administrative Support Workers earn an US average of \$39,410. Vermont's average wage is \$39,940. While the demand for Computer Operators appears to be on the decline, the average US wage is \$29,430 and for Vermont \$26,090. The average US wage for Data Entry Keyers is \$22,170, while Vermont's average is \$19,560. Customer Service representatives will be in high demand with an average Vermont salary of \$26,150.

The occupations in the Business, Management, and Administration Support Career Cluster that remain in high demand promise to require specific skills in organization, time management, customer service, and communication skills. Core competencies found in this cluster will address those soft skills so necessary for on-the-job success.

License: Business

Academics Addressed:

Arts, Language and Reading:

Vermont Standard 5.17: Dialects

Students respect diversity in dialects.

Vermont Standard 5.18: Structures

Students demonstrate an understanding of the structures of the English language (e.g., sentence, paragraph, text structure).

Vermont Standard 5.15: Design and Production

Students design and create media products that successfully communicate.

Science, Mathematics, and Technology:

Vermont Standard 7.2i: Inquiry, Experimentation, and Theory: Investigation

Students design and conduct a variety of their own investigations and projects.

Vermont Standard 7.6aa,bb,ff,gg,hh, aaa: Mathematical Understanding: Arithmetic, Number, and Operation Concepts Students understand arithmetic in computation, and they select and use, in appropriate situations, mental arithmetic, pencil and paper, calculator, and computer.

Vermont Standard 7.9cc: Statistics and Probability Concepts Make conclusions and recommendations based on data analysis, and analyze the conclusions and recommendations of others.

Vermont Standard 7.10aa, bbb, dd, ee: Mathematical Problem Solving and Reasoning: Applications

Students use concrete, formal, and informal strategies to solve mathematical problems, apply the process of mathematical modeling, and extend and generalize mathematical concepts. Students apply mathematics as they solve technological problems or work with technological systems.

Vermont Standard 7.11aaa, bbb: Systems: Analysis

Demonstrate understanding that analysis of systems is important to define and control inputs and outputs; and Demonstrate understanding that systems are effectively designed when specifications and constraints are understood; systems are optimized when efficiencies are maximized; and a system is never 100 percent efficient (entropy).

History and Social Studies:

Vermont Standard 6.15:Knowledge of Economic Systems

Students use the basic principals of economics to interpret local, state, national, and international economic activity.

Vital Results Addressed:

Communications:

Reading 1.2 Reading Accuracy: Students read grade appropriate material, with 90% + accuracy, in a way that makes meaning clear

Reading 1.3 Reading Comprehension: Students read for meaning, demonstrating both initial understanding and personal response to what is read.

Reading 1.4 Reading Range of Text: Students comprehend and respond to a range of media, images, and text (e.g., Poetry, narrative, information, technical) for a variety of purposes (e.g., reading for pleasure as well as reading to develop understanding and expertise).

Listening 1.13 Clarification and Restatement: Students listen actively and respond to communications.

Expression 1.15 Speaking: Students use verbal and nonverbal skills to express themselves effectively.

Information Technology/Literacy 1.18 Information Technology: Students use computers, telecommunications, and other tools of technology to research, to gather information and ideas, and to represent information and ideas accurately and appropriately

Information Technology/Literacy 1.19 Research: Students use organizational systems to obtain information from various sources (including libraries and the Internet).

Information Technology 1.20 Communication of Data: Students use graphs, charts, and other visual presentations to communicate data accurately and appropriately.

Writing 1.5 Writing Dimensions: Students draft, revise, edit, and critique written products so that final drafts are appropriate in terms of the following dimensions: Purpose---Organization---Details---Voice or Tone.

Writing 1.6 Writing Conventions: Students' independent writing demonstrates command of appropriate English conventions, including grammar, usage, and mechanics.

Writing 1.8 Reports: In written reports, students organize and convey information and ideas accurately and effectively.

Writing 1.10 Procedures: In written procedures, students relate a series of steps that a reader can follow.

Writing 1.11 Persuasive Writing: In persuasive writing, students judge, propose, and persuade.

Reasoning and Problem Solving:

Problem Solving Process 2.3 Students solve problems of increasing complexity

Personal Development:

Relationships 3.11 Students interact respectfully with others, including those with whom they have differences **Workplace 3.14** Students demonstrate dependability, productivity, and initiative

Business and Administration Technology Program Cluster Core Competencies

Occupational Skills The student demonstrates the specified level of competency in occupational skills: 0 1 2 3 4 No Exposure Introduced Practiced Entry Level Competency

Vermont Standards 1.2, 1.3, 1.5, 1.6, 1.13, 1.15, 1.18, 1.19, 1.20, 1.2, 2.3aa, 2.4, 3.5, 3.10, 3.11,3.12, 3.13, 3.14, 3.15, 3.16, 4.1, 4.36, 5.17, 15, 6.16, 6.18, 6.24, 7.2, 7.18c

BUSINESS AND ADMINISTRATION TECHNOLOGY PROGRAM CLUSTER

FOUNDATION CORE COMPETENCIES

0 1 2 3 4 00000	A.	Demonstrate an Understanding of Business Organizations/Systems and Policies
θθθθθ	B.	Use English, Language Arts to Communicate Effectively
$\theta\theta\theta\theta\theta$	C.	Demonstrate Customer Sales and Service Skills in an Office Environment
$\theta\theta\theta\theta\theta$	D.	Demonstrate Leadership and Teamwork
$\theta\theta\theta\theta\theta$	E.	Demonstrate Employability and Career Development Skills
$\theta\theta\theta\theta\theta$	F.	Demonstrate Problem Solving and Critical Thinking
99999	G.	Demonstrate Ethics and Legal Responsibility
99999	H.	Demonstrate Safety and Health in the Office Environment
$\theta\theta\theta\theta\theta$	I.	Demonstrate Use of Technology in the Office Environment

Business and Administration Technology Program Cluster Core Competencies

Satisfaction of these cluster core competencies provides the basis to proceed into the student's choice of concentration areas:

Foundation Cluster Core Competencies

0 1 2 3 4		
$\theta\theta\theta\theta\theta$	A.	Demonstrate an Understanding of Business Organizations/Systems and Policies
	*A.001	Identify three different types of business organizations naming strengths and weaknesses of each
	*A.002 *A.003	system Describe the topics commonly covered in business employer's personnel policies Describe the roles of business enterprises, consumers, and government in our mixed and global
	*A.004	economy Describe current and emerging trends in business
θθθθθ	*B.001 *B.002 *B.003 *B.004 *B.005 *B.006 *B.007 *B.008 *B.009 *B.010 *B.011 *B.012 *B.013 *B.014	Use English and Language Arts to Communicate Effectively Demonstrate effective oral communication skills Demonstrate effective written communication skills Demonstrate active listening skills Demonstrate ability to work with diverse populations Read business materials with accuracy and comprehension (i.e. directions, technical documents, legal documents, memorandums and biographical information) Research (including use of technology), prepare, and present oral reports that include visual aids Proofread and edit documents accurately Compose business correspondence Utilize reference materials Use a variety of resources to obtain information Communication effectively using tools such as telephone, email, and fax Follow written/oral directions Compose written directions Compose correspondence and reports
θθθθθ	C. *C.001 *C.002 *C.003 *C.004 *C.005 *C.006 *C.007 *C.008 *C.009 *C.010 *C.011	Demonstrate Customer Service Skills in an Office Environment Apply interpersonal skills to develop good customer relationships Demonstrate involving customers in providing service Provide a high level of service to customers/clients Demonstrate customers' testing and sampling products or services Compare competitor products or services, including marketing materials (ads, fliers, TV commercials, web pages, etc.) Assess and respond to customer needs Educate customer in products, services, prices, options, soliciting supervisor or co-worker support and advice when necessary to meet customer needs. Develop a plan to provide ongoing customer support, including dissatisfaction resolution Develop and implement strategy for selling products or services (including price strategy, and targeting customer) Gain customer commitment and complete the transaction Develop and implement a sales follow-up plan
θθθθθ	D. *D.001 *D.002 *D.003 *D.004 *D.005	Demonstrate Leadership and Teamwork Describe characteristics of a good leader Identify the purposes and goals of the student organization Demonstrate the characteristics of a responsible organization member Demonstrate business etiquette while participating in meetings and group activities Create and maintain effective and productive work relationships

θθθθθ	*E.001 *E.002 *E.003 *E.004 *E.005 *E.006 *E.007 *E.008 *E.009 *E.010 *E.011	Demonstrate Employability and Career Development Skills Meet dress, personal hygiene and appearance codes set by management Present employment opportunities in Business and Administration Develop a career plan Display an understanding of the need for ongoing education as a worker Use organizational systems (technology and library) to gain access to resources that contribute to professional development Read, with accuracy and comprehension, technical business literature to update and maintain a level of current technical knowledge. Update portfolio, including resume format suitable for on-line posting Identify potential employment barriers for nontraditional groups and ways to overcome the barriers Identify steps to follow in resigning from a position Demonstrate effective job interviewing skills Demonstrate dependability, productivity and initiative appropriate to achieve career and technical tasks
00000	F. *F.001 *F.002	Demonstrate Problem Solving and Critical Thinking Provide solutions to problems in the workplace Demonstrate problem solving and conflict resolution skills
00000	G. *G.001 G.002 *G.003 *G.004	Demonstrate Ethics and Legal Responsibility Demonstrate ethics in business Demonstrate procedures to ensure requirements for insurance and compliance are met Maintain confidential records Comply with business laws and regulations
00000	H. *H.001 *H.002 *H.003 *H.004	Demonstrate Safety and Health in the Office Environment Identify good work attitudes that affect safety on the job Compile and update Material Safety Data Sheets Report needed safety and equipment repairs to the appropriate parties Demonstrate safe worksite procedures i.e.: 1) adhering to safety rules, b) taking care of tools and equipment, c) using tools and equipment appropriately, and d) keeping work area clean
θθθθθ	I. *I.001 *I.002	Demonstrate Use of Technology in the Office Environment Demonstrate a basic working knowledge of technology applicable to the office environment including using computers for information processing, Internet usage and Internet applications Practice a code of ethics for information systems

I. Administrative and Information Support Occupations Concentration Technical Skills Competencies

CIP: 52.0407

	C	Occupational SI	kills		
The student dem	nonstrates the s	pecified level of	competency in o	ccupational skills:	
0	1	2	3	4	
No Exposure	Introduced	Practiced	Entry Level	Competency	

Vermont Standards 2.14, 2.3, 5.15, 5.18, 6.16c, 7.6 Aligned with V-TECS Administrative Support Technical Core Skills

0 1 2 3 4		
$\theta\theta\theta\theta\theta$	J.	Organize and Plan Functions
$\theta\theta\theta\theta\theta$	K.	Maintain Equipment and Supplies
$\theta\theta\theta\theta\theta$	L.	Apply Mathematical and Financial Skills
$\theta\theta\theta\theta\theta$	M.	Manage Records and Files
$\theta\theta\theta\theta\theta$	N.	Communicate Effectively in Administrative/Information Support
00000	0.	Demonstrate General Knowledge of Information Systems Technology Applications
$\theta\theta\theta\theta\theta$	P.	Diagnose and Solve Problems Related to the Operation of Computers
$\theta\theta\theta\theta\theta$	Q.	Demonstrate Quality Document Production
$\theta\theta\theta\theta\theta$	R.	Distribute Information

Satisfaction of these competencies entitles student to certificate in Administrative and Information Support Occupations Technical Skills Competencies Certificate (awarded locally). These competencies are aligned with industry-recognized standards developed by the Vocational Technical Education Consortium of States (V-TECS).

Occupational Skills The student demonstrates the specified level of competency in occupational skills: 0 1 2 3 4 No Exposure Introduced Practiced Entry Level Competency

I. Administrative and Information Support Occupations Concentration Technical Skills Competencies

Technical Skills Competencies			
Administrative and Information Support Concentration Area Technical Skills			
θθθθθ	*J.001 *J.002 *J.003 *J.004 *J.005 *J.006 J.007 *J.008	Organize and Plan Functions Schedule the working day to achieve maximum personal and office efficiency by arranging work area and using appropriate time management (calendar, planner). Prepare agenda/minutes, and compile meeting materials Demonstrate the ability to: a) preview a list of tasks; b) set priorities and/or make decisions within limits of authority Describe the components of an effective meeting site (food, facilities, and equipment) Prepare information for public notice Plan a business trip (e.g., reservations, itinerary) Explain why international travel requires more research and preparation than domestic travel. Gather and compile data for supervisor to present and for company reports.	
θθθθθ	K. *K.001 K.002 *K.003 *K.004	Maintain Equipment and Supplies Demonstrate correct office procedures in maintaining workspace, equipment, furniture, supplies, and software (e.g., printer, copier, fax machine) Demonstrate the ability to train or assist others in operating equipment Demonstrate correct office procedures used in purchasing office equipment, furniture, supplies and software. Demonstrate an understanding of the inventory process (hardware, software, furniture, equipment & supplies)	
θθθθθ	L. *L.001 *L.002 *L.003 L.004 *L.005 L.006 *L.007	Apply Mathematical and Financial Skills Accurately operate the electronic calculator and/or numeric keypad using the touch system. Prepare/set up financial reports (vouchers, expense report, etc.) Demonstrate the ability to maintain a petty cash account Demonstrate knowledge of the fundamental payroll concepts Accurately maintain and reconcile a checking account Analyze spreadsheet data Explain the use of certified checks, cashier's checks, bank drafts, money orders, and stop payment requests. Demonstrate the procedures used in budgeting	
00000	M. *M.001 *M.002	Manage Records and Files Explain the importance of records management. Name the basic filing systems and common equipment associated.	

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	*M.004 *M.005	Demonstrate the ability to maintain records (biographical, historical and personnel etc.) Read and demonstrate an understanding of record management laws
$\theta\theta\theta\theta\theta$	N.	Communicate Effectively in Administrative and Information Support
	*N.001 *N.002	Demonstrate the proper introduction of self and others in business settings Describe the importance of the following professional qualities when given various office situations: confidentiality, honesty, loyalty, courtesy, cooperation, alertness, ambition, punctuality, interest, involvement, patience, tact, self-confidence, sense of humor, dependability/reliability, flexibility, and initiative.
	*N.003	Demonstrate proper procedures for screening and processing visitors
	*N.004	Demonstrate proper procedures for scheduling, confirming, canceling, and rescheduling appointments (by telephone, in person, or by written communications).
	*N.005 *N.006	Place/receive telephone calls (including conference calls) Prepare written and electronic telephone messages
	N.000	Explain office procedures verbally and in writing
	N.008	Conduct orientation of new employees
	*N.009	Direct inquiries
	N.010	Develop liaisons with business related organizations
	N.011	Participate in task forces
	*N.012	Demonstrate the ability to process incoming and outgoing mail
$\theta\theta\theta\theta\theta$	0.	Demonstrate Knowledge of Information Support Technology Applications
	*O.001	Describe how the information technology industry impacts society.
	*O.002	Identify laws and rules pertaining to computer crime, fraud, and abuse
	*0.003	Demonstrate safety in information/systems technology
	*O.004 *O.005	Use operating system commands Describe emerging hardware and software
	*O.006	Identify and use communication software
	0.007	Access, navigate and use online services for communication and research
	*O.008	Identify and compare types of programming languages
	*O.009	Import text and graphics from other software programs
	O.010 *O.011	Develop and make presentations using software applications Plan and create a database using software applications
	0.011	Create a computer-generated calendar
00000	P.	Diagnose and Solve Problems Related to the Operation of Computers
00000	P.001	Apply preventative measures to maintain system data integrity (i.e. virus protection, backups, and other utilities)
	*P.002	Update software programs
	*P.003	Demonstrate knowledge and application of operating system components
	*P.004	Demonstrate knowledge of three major parts of computer system: Input, Processing Output
	*P.005	Identify the component hardware of personal computers: motherboard, RAM, expansion slots/cards, storage media, microprocessor, video device, ports.
	*P.006	Demonstrate an understanding of Network Fundamentals
$\theta\theta\theta\theta\theta$	Q.	Demonstrate Quality Document Production
	Q.001	Key 35 net words per minute for 5 minutes.
	Q.002	Demonstrate the ability to transcribe at the keyboard
	Q.003	Demonstrate the ability to take dictation
	*Q.004 Q.005	Produce quality documents using word processing software Produce documents using database software
	*Q.005	Produce documents using database software Produce documents using spreadsheet software
	Q.007	Use common features of multimedia software
	Q.008	Use desktop publishing software to create quality documents
	Q.009	Produce documents integrating word processing, database, and spreadsheets and/or presentation files
	Q.010 *Q.011	Scan data or graphics into a document electronically Demonstrate the ability to secure document notarization

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		Demonstrate the ability to choose the appropriate software application for a given situation Create documents by merging information
θθθθθ	R. *R.001 *R.002 *R.003 *R.004 *R.005 R.006	Distribute Information Demonstrate the ability to choose appropriate methods to distribute information. Demonstrate the ability to use multifunction photocopier. Demonstrate the ability to use fax machine. Demonstrate the ability to postage meter. Demonstrate the ability to select the appropriate mail service. Access, navigate, and use on-line services to distribute information

RESOURCES

- 1. Occupational Outlook Handbook 2001-2002 US Dept. of Labor
- 2. O'Net Resource Center www.onetcenter.org US Dept. of Labor
- 3. Customer Service and Sales Skills Standards, 2001 Sales and Service Voluntary Partnership www.ssvp.org
- 4. Vocational Technical Education Consortium of States Administrative Support Occupations Skill Standards, 1996
- 5. Vocational Technical Education Consortium of States Business Management Occupations Skill Standards, 1998
- 6. Vocational Technical Education Consortium of States Financial Occupations Skills Standards, 2000
- 7. National Skill Standards Board
- 8. International Association of Administrative Professionals (IAAP)
- 9. Nivo International www.nivonet.com/ic3/
- 10. Microsoft www.microsoft.com/trainingandservices.redirect/
- 11. World Organization of Webmasters www.ciwcertified.com
- 12. National Business Education Association National Standards for Business Education
- 13. South Carolina Dept. of Education Office of career and Technology Education
- 14. Wisconsin Department of Public Instruction
- 15. Virginia Dept. of Education, Office of Career and Technical Education Services
- 16. Florida Dept. of Education 0- Division of Workforce Development, Business Technology
- 17. US Dept. of Education Office of Vocational and Adult Education
- 18. Brainbench (www.brainbench.com)
- 19. American E-commerce Association
- 20. International Webmasters Association
- 21. Vermont Framework of Standards and Learning Opportunities

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